

IN THE CLAIMS:

This listing of claims provided below will replace all prior versions and listings of claims in the application.

1. (Previously Presented) An inkjet ink comprising a pigment, a water-soluble solvent and water, the water-soluble solvent comprising:

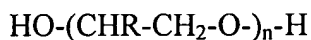
a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ;

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than the solubility parameter SP_1 and;

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ;

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

2. (Previously Presented) The inkjet ink of claim 1, wherein the first water-soluble organic solvent group further comprises a water-soluble solvent other than the water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

3. (Previously Presented) The inkjet ink of claim 1, wherein the pigment is self-dispersible in water.

4. (Previously Presented) The inkjet ink of claim 3, further comprising a polymer anion or a polymer cation.

5. (Previously Presented) The inkjet ink of claim 1, further comprising a polymer dispersant, wherein the pigment is dispersed by the polymer dispersant.

6. (Currently Amended) An inkjet ink comprising a pigment, a water-soluble solvent and water, the water-soluble solvent comprising:

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ;

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than the solubility parameter SP_1 and;

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ;

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink,

wherein the first water-soluble organic solvent group further comprises a water-soluble

solvent other than the water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1, and

wherein an absolute value of a ζ potential of the inkjet ink is in the range of 3 mV to 60 mV.

7. (Previously Presented) The inkjet ink of claim 1, wherein the surface tension of the inkjet ink is at least 20 Nm/m and less than 45 mN/m.

8. (Previously Presented) The inkjet ink according to claim 1, wherein the viscosity of the inkjet ink is at least 1.2 mPa•s and less than 6.0 mPa•s.

9. (Previously Presented) An inkjet recording method of printing on a recording medium, the recording medium comprising a multivalent metal salt, an organic cationic substance or an organic anionic substance, using an inkjet ink comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent comprises,

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ,

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP_1 , and

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ; and

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W₁ represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W₂ represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W₃ represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

10. (Previously Presented) The inkjet recording method of claim 9, wherein the first water-soluble organic solvent group further comprises a water-soluble solvent other than the water-soluble solvent represented by the general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP₁ is less than 1.

11. (Previously Presented) The inkjet recording method of claim 9, wherein the number of particles having particle diameters of 5 μm or larger contained in the inkjet ink is $1 \times 10^2/\mu\text{l}$ or more, and wherein the inkjet ink is added dropwise to a surface of the recording medium.

12. (Previously Presented) An inkjet recording method, wherein a liquid composition comprising a multivalent metal salt, an organic cationic substance or an organic anionic substance is imparted to a surface of a recording medium and, thereafter, printing is conducted on a region of the surface of the recording medium to which the liquid composition has been imparted, using an inkjet ink comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent comprises

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP₁;

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP₁ and;

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP₁; and

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 < 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represent a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

13. (Previously Presented) The inkjet recording method of claim 12, wherein the first water-soluble organic solvent group further comprises a water-soluble solvent other than the water-soluble solvent represented by the general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

14. (Previously Presented) The inkjet recording method of claim 12, wherein the number of particles having particle diameters of 5 μm or larger in a mixed solution of the inkjet ink and the liquid composition is $1.0 \times 10^3/\mu\text{l}$ or more.

15. (Previously Presented) An inkjet recording method of printing on a recording medium by a thermal inkjet system or a piezo-inkjet system using an inkjet ink comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent comprises

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ,

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP_1 , and

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ; and

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

16. (Previously Presented) The inkjet recording method of claim 15, wherein the first water-soluble organic solvent group comprises a water-soluble solvent other than the at least one kind of water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

17. (Previously Presented) The inkjet recording method of claim 15, wherein the amount of the inkjet ink to be imparted to a surface of the recording medium is 25 ng or less per one droplet.

18. (Previously Presented) The inkjet ink of claim 1, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

19. (Previously Presented) The inkjet recording method of claim 9, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

20. (Previously Presented) The inkjet recording method of claim 12, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

21. (Previously Presented) The inkjet recording method of claim 15, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.